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October 2, 2019

Sent via email/eFile

<b>FEI REVELSTOKE PROPANE PORTFOLIO COST AMALGAMATION EXHIBIT A-3</b>
---------------------------------------------------------------------------

Mr. Doug Slater  
Director, Regulatory Affairs  
FortisBC Energy Inc.  
16705 Fraser Highway  
Surrey, BC V4N 0E8  
gas.regulatory.affairs@fortisbc.com

**Re: FortisBC Energy Inc. – Revelstoke Propane Portfolio Cost Amalgamation Application – Project No. 1599033 – Information Request No. 1**

Dear Mr. Slater:

Further to your July 18, 2019 Revelstoke Propane Portfolio Cost Amalgamation Application, enclosed please find British Columbia Utilities Commission Information Request No. 1. In accordance with the regulatory timetable established by Order G-201-19, file your response on or before Thursday, October 24, 2019.

Sincerely,

*Original signed by:*

Patrick Wruck  
Commission Secretary

/dg  
Enclosure



FortisBC Energy Inc (FEI)  
Revelstoke Propane Portfolio Cost Amalgamation Application

**INFORMATION REQUEST NO. 1 TO FORTISBC ENERGY INC.**

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**A. AMALGAMATION OPTIONS AND OBJECTIVES**

- 1.0 Reference: AMALGAMATION OPTIONS AND OBJECTIVES**  
**Exhibit B-1, Application, Section 1.1, p. 1**  
**Revelstoke Propane Supply**

On Page 1 of the Application, FEI states:

When the piped propane system was first introduced to Revelstoke in 1991, it was because Revelstoke was located at too great a distance from the natural gas distribution system and its forecast load was insufficient to make connection economic. Although FEI’s customers in Revelstoke are charged the same delivery rate as those in other regions across BC (except Fort Nelson), they are charged a different cost for energy relative to FEI’s natural gas customers. Commodity prices for propane have historically been more volatile and higher than natural gas prices on an energy equivalent basis. As a result, Revelstoke propane customers have had less predictable and higher energy costs relative to FEI’s natural gas customers.

- 1.1 Please confirm, or explain otherwise, that since 1991, Revelstoke customers have had continually higher energy costs compared to FEI’s natural gas customers.
  - 1.1.1 If confirmed, please explain FEI’s rationale for proposing the Revelstoke propane amalgamation at this time.
- 1.2 Please provide a chart comparing propane and natural gas prices since 1991.
- 1.3 Has the price of propane relative to natural gas (i.e. the average price differential) increased since 1991? Please explain, providing any relevant calculations in your response.
- 1.4 Has the volatility of propane relative to natural gas increased since 1991? Please explain, providing any relevant calculations in your response.

**2.0 Reference: AMALGAMATION OPTIONS AND OBJECTIVES**  
**Exhibit B-1, Section 1.1, p. 1; Section 2.2, pp. 5–6; Section 3.2, pp. 8–11, Section 3.3, pp. 12–13; Section 3.4, p. 14,**  
**Proposed Changes to Commodity Rate Setting & Objectives**

On page 1 of the Application, FEI states: “The proposed rate setting mechanism will provide Revelstoke customers with propane rate stability that matches the stability of FEI’s natural gas customer rates, and can provide propane commodity rate relief to Revelstoke customers.” [Emphasis Added]

On pages 5–6 of the Application, FEI states:

This Application proposes changes to reduce future commodity rate volatility for FEI’s Revelstoke propane customers. The proposed mechanism will provide Revelstoke propane customers with propane rate stability matching that of FEI natural gas customer rates and, based on the historical relationship between the natural gas and propane commodities, could also reduce annual energy bills for Revelstoke propane customers. Volatile energy input costs in a specific region can be a disadvantage to households and businesses that can lead to diminished economic development and job creation opportunities. FEI believes that stabilizing propane rates is beneficial for Revelstoke customers and may contribute to encouraging other Revelstoke energy users to switch from higher-carbon heating oil to propane. As such, the proposed changes support the following two of BC’s energy objectives under section 2 of *the Clean Energy Act*:

- (h) to encourage the switching from one kind of energy source or use to another that decreases greenhouse gas emissions in British Columbia; and
  - (k) to encourage economic development and the creation and retention of jobs.
- [Emphasis added]

On page 8 of the Application, FEI states: “FEI considered two options for calculating the propane gas cost recovery rates for Revelstoke customers: 1) equal gas cost recovery and 2) a five-year rolling average of the price difference between propane and natural gas.”

On page 9 of the Application, FEI states:

Option 1 treats Revelstoke propane customers and FEI’s natural gas customers the same with respect to the commodity related charges...Under this equal commodity cost recovery option, FEI’s Revelstoke propane and FEI’s natural gas customers will pay the same commodity related charges per GJ, but alignment with BC’s energy objectives is preserved as propane customers will continue to pay higher carbon tax rates than natural gas customers.

On pages 10–11 of the Application, FEI states:

Under Option 2, FEI proposes to set the propane gas cost recovery rate with a premium multiplier based on the five-year rolling average of annual propane to natural gas price ratios.... FEI notes that this rate setting mechanism does not provide rate relief to Revelstoke customers as, over the long term, the negative and positive variances between the current price difference of propane versus natural gas and the price difference set by the five-year rolling average indexed multiplier will tend to counterbalance each other. [Emphasis Added]

On page 14, FEI provides a comparison table:

**Table 3-5: Comparison of Propane Gas Cost Recovery Rates Calculation Options**

	Option 1 – Equal Natural Gas and Propane Cost Recovery	Option 2 – Five-Year Rolling Price Difference
Mitigates Propane Rate Volatility	Yes	Yes
Provides Rate Relief for Revelstoke Propane Customers	Yes	No
Midstream Rate Impact for FEI Natural Gas Customers	Small	Small
Supports BC’s Energy Objectives	Yes	Yes

- 2.1 Please confirm, or explain otherwise, that “rate relief for Revelstoke propane customers” is an aim to achieve rate affordability for Revelstoke propane customers.
- 2.2 Please explain if Table 3-5 includes all of FEI’s objectives of the proposed amalgamation, ranked in order of priority.
  - 2.2.1 Please provide all of FEI’s objective(s) of the proposed amalgamation, ranked according to FEI’s priority.
    - 2.2.1.1 Please explain how FEI ranked multiple objectives.
    - 2.2.1.2 Please update Table 3-5, as needed, evaluating Options 1 and 2 against the listed objectives, ranked according to their priority.
- 2.3 Please confirm which proposed option is FEI’s preferred option for Revelstoke customers.
- 2.4 Please discuss the difference between option 1 and option 2 in terms of ability to provide rate stability.
- 2.5 Has FEI received any comments or concerns from the City of Revelstoke or Revelstoke customers related to energy price or stability? In your response, please provide a summary of any feedback received.
- 2.6 Please confirm, or otherwise explain, that FEI conducted consultations with the residents of Revelstoke prior to filing the Application.
  - 2.6.1 If confirmed, please provide any information FEI provided to Revelstoke customers prior to filing the Application.
  - 2.6.2 If not confirmed, please explain why FEI did not consult with Revelstoke customers prior to the filing of the Application.
- 2.7 Please provide the number of Revelstoke energy users that use heating oil as their fuel source.
  - 2.7.1 Please provide a cost estimate of conversion for the customers identified above.
  - 2.7.2 Please provide an estimate of the reduction in greenhouse gas emissions as a result of Revelstoke customers switching to propane.
  - 2.7.3 Please discuss the likelihood and an estimate of the expected conversion of these customers from heating oil to propane.
- 2.8 Please discuss whether the proposed amalgamation is part of a longer-term strategy for FEI in Revelstoke and how the proposed amalgamation supports that longer-term strategy.
- 2.9 What impact if any, does the proposal have on FEI’s Annual Contracting Plan (ACP) and Revelstoke ACP? Please elaborate.

2.10 Please discuss how FEI's proposal supports the creation and retention of jobs.

**3.0 Reference: AMALGAMATION OPTIONS AND OBJECTIVES**  
**Exhibit B-1, Section 2, p. 3**  
**Public Interest**

On page 3 of the Application, FEI states: "... Revelstoke commodity rate stability is in the public interest because it provides benefits to customers and supports BC's energy objectives."

3.1 Please discuss how the proposed changes benefit FEI's natural gas ratepayers.

3.2 Please explain whether FEI expects any regulatory, accounting or other efficiencies that would be achieved in the event the proposed amalgamation is approved.

3.2.1 If so, please discuss whether these efficiencies may result in cost reductions to customers.

**4.0 Reference: AMALGAMATION OPTIONS AND OBJECTIVES**  
**Exhibit B-1, Section 6, p. 23; Utilities Commission Act (UCA), Sections 58–61**  
**Approvals Sought**

On page 23 of the Application, FEI states: "FEI hereby applies to the BCUC, pursuant to sections 58 to 61 of the Utilities Commission Act, effective January 1, 2020."

Section 59(1) (a) of the UCA states:

"a public utility must not make, demand or receive. . . an unjust, unreasonable, unduly discriminatory or unduly preferential rate."

4.1 Please discuss the impact if approval of the Application is not provided in time for a January 2020 implementation date.

4.1.1 Please discuss whether having a later implementation date, for example the start of the second or third quarter of 2020, is a viable option.

4.1.2 If this is not a viable option, please discuss if other options, such as an interim rate, is workable.

4.2 Please discuss how this Application satisfies the requirements of sections 58–61 of the UCA.

4.3 Please explain how, as part of the amalgamation to provide rate stability to Revelstoke propane customers, a rate increase to FEI's natural gas customers is not "unduly discriminatory."

**B. CALCULATIONS AND FORECASTS**

**5.0 Reference: CALCULATIONS AND FORECASTS**  
**Exhibit B-1, Section 3.2, p. 8; Section 3.3, pp. 12–14, footnotes 14–16**  
**Forecast Load Growth and Calculation Assumptions**

On page 8 of the Application, FEI states:

FEI considered two options for calculating the propane gas cost recovery rates for Revelstoke customers: 1) equal gas cost recovery and 2) a five-year rolling average of the price difference between propane and natural gas. The remainder of this section

discusses the two options in detail. This includes an illustration of the commodity related charges for both FEI's natural gas customers and Revelstoke propane customers under each option using the following assumptions:

- Commodity related charges are effective January 1, 2020, assuming the amalgamation occurs on January 1, 2020;
- Annual consumption of 50 GJ;
- ...

In footnotes 14 to 16 on pages 12 to 13, FEI states:

"...average annual of \$0.99 based on 90GJs per year," footnote 15 states "... average annual of \$0.54 based on 90GJs per year and footnote 16 states "... average annual of \$1.98 based on 90GJs per year." [Emphasis added]

- 5.1 Please provide the annual average consumption in GJ for FEI's Revelstoke propane customer compared to a natural gas customer.
- 5.2 Please confirm, or otherwise explain, that customers in FEI's Mainland and Vancouver Island service area use 40GJ per year more than Revelstoke customers.
  - 5.2.1 If confirmed, please provide an explanation for this 40 GJ variance.
- 5.3 Please explain why FEI used different assumptions related to annual consumption (50GJ for Revelstoke propane customers and 90GJ for a typical residential natural gas customer) to calculate the costs and benefits of the proposed amalgamation.

**6.0 Reference: CALCULATIONS AND FORECASTS  
Exhibit B-1, Section 4.1, pp. 16–17; Appendix B, Section 2, p. 3  
UPC Projections**

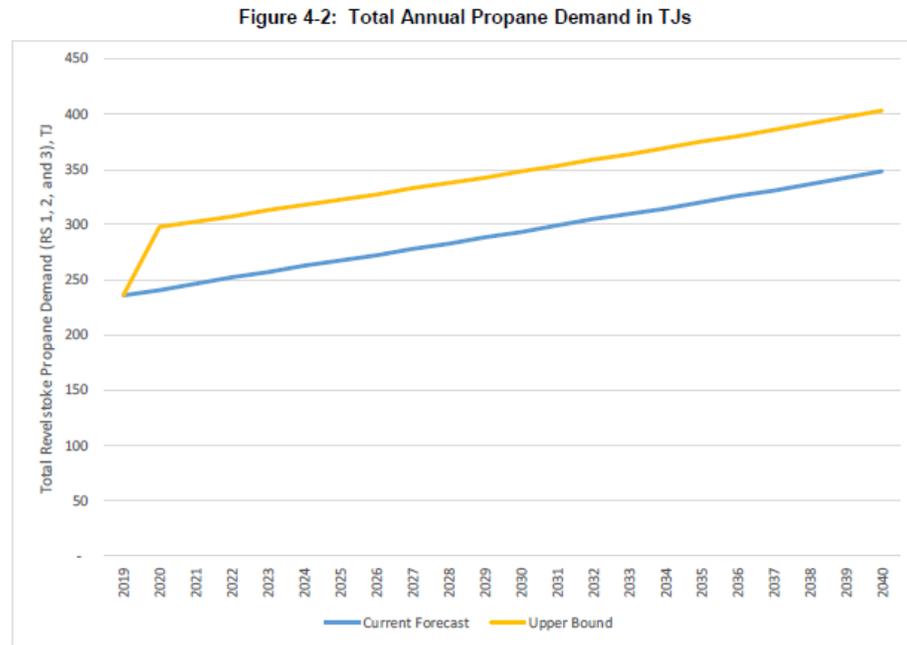
On page 3 of Appendix B of the Application, FEI states: "...individual UPC projections for each residential and commercial rate schedule are developed by considering the recent (three-year) historical weather-normalized UPC."

On page 16 of the Application FEI states:

The annual demand forecast for residential and commercial customers relies on two components:

- Average use per customer (UPC) forecast; and
- Customer forecast.

On page 17, FEI provides the following chart:



Specifically, the average UPC is estimated for customers served under RS 1, 2 and 3 and is then multiplied by the corresponding forecast of the number of customers (opening number of customers plus average net customer additions during the year) in these rate schedules to derive energy consumption.

- 6.1 Please explain if FEI expects the individual UPC projections for each rate schedule to differ from forecast when accounting for potential increased consumption as a result of a lower rate for propane.
  - 6.1.1 If so, please provide any relevant analysis for the expected increase in UPC.
- 6.2 Please provide any relevant analysis of elasticity assumptions used to forecast UPC.
- 6.3 Please confirm, or otherwise explain, that the forecast total Revelstoke propane demand as per Figure 4-2 uses UPC forecasts based on current propane pricing.
  - 6.3.1 Please update Figure 4-2 to include the forecast total Revelstoke propane demand based on the lower propane rate as proposed in the Application and FEI's elasticity assumptions.

**7.0 Reference: CALCULATIONS AND FORECASTS  
Exhibit B-1, Section 4.1, pp. 15–17  
Customer Conversion & Connection Costs**

On page 15 of the Application, FEI states:

Based on FEI's geographic information system (GIS), FEI identified 1,063 residential dwellings within 30 metres of an existing main in Revelstoke that are currently not FEI Revelstoke propane customers. Since there are incremental connection costs associated with residential dwellings that are greater than 30 metres from an existing main, FEI believes these dwellings represent the extent of the customers that are likely to consider conversion to propane service. Since the number and evolution of conversions over time is uncertain, FEI assumed all identified 1,063 residential dwellings

will connect to FEI's propane system in Revelstoke in 2020 to illustrate an Upper Bound delivery rate impact on FEI and Revelstoke customers. FEI notes that no conversion additions were forecasted for commercial customers in Revelstoke under this Upper Bound scenario as FEI assumes commercial customers that have the ability to take propane service have done so already.

On page 17 of the Application, FEI states:

[I]n the unlikely event that all 1,063 residential dwellings identified within 30 metres of an existing main in Revelstoke convert to propane immediately in 2020, the total propane demand in Revelstoke is forecasted to increase by approximately 26 percent, from the current forecast demand of 236 TJ to 298 TJ in 2020.

- 7.1 Please provide an estimate of the total number of residential dwellings that FEI expects to convert to propane.
- 7.2 Did FEI perform any analysis on the likelihood of the Upper Bound scenario? Please discuss.
  - 7.2.1 If yes, please provide any relevant analysis with accompanying data.
  - 7.2.2 If not, why not?
- 7.3 Please discuss the estimated value of the "incremental connection costs" for residential dwellings greater than 30 meters from an existing main.
  - 7.3.1 Please explain how these costs compare with the value of potential savings made from switching to propane service in the event the application is approved.
- 7.4 Please clarify the basis for the assumption that there would be no additional conversions for commercial customers in Revelstoke.

**8.0 Reference: CALCULATIONS AND FORECASTS  
Exhibit B-1, Section 4.2, pp. 17–18  
Revelstoke Propane System & Capital Costs**

On pages 17–18 of the Application, FEI states:

Based on the forecasted growth under the Upper Bound scenario, the existing distribution system in Revelstoke will require three additional propane storage tanks and a distribution main upgrade in order to serve Revelstoke's existing customers as well as the additional load from the conversions as described in Section 4.1 above. The capital upgrades will have to be implemented immediately in the first year after the proposed amalgamation of propane and natural gas costs begins as the Upper Bound scenario assumes all additional conversions occur in the first year after the proposed amalgamation becomes effective. The total capital cost for the upgrade is estimated to be \$2.798 million in 2019 dollars.

- 8.1 Please confirm the number and associated propane capacity of the storage tanks currently in operation in Revelstoke.
  - 8.1.1 Please provide photos or diagrams of the storage tanks and system currently in operation.
  - 8.1.2 Please provide the number of days the current storage facilities are able to serve Revelstoke supply.

- 8.2 Please clarify the impact to the total capital cost for the upgrade if additional commercial customers were to switch to propane.
- 8.3 Please provide an estimate of the cost of upgrading the existing storage and distribution system compared to connecting Revelstoke to the natural gas mainline.
- 8.4 Please explain if the additional storage tanks and distribution main upgrade would be compatible if the Revelstoke propane system was to be converted to use another fuel source such as liquefied natural gas (LNG) or compressed natural gas (CNG).
- 8.5 Please discuss to what extent the proposed cost amalgamation increases the likelihood that these capital upgrades will be required.
- 8.5.1 Please explain how the costs for the upgrade will be recovered, including any impact on rates.
- 8.6 Please explain whether FEI considered additional storage as a means of smoothing rates to account for seasonal variability.
- 8.6.1 If so, please discuss the advantages and disadvantages of such an approach.
- 8.6.2 If not, please explain why not.

## C. RATES

- 9.0 Reference: **COMMODITY RATE SETTING**  
**FEI's Application for Approval of 2019-2020 Revenue Requirements and Rates for the Fort Nelson Service Area (2019-2020 Fort Nelson RRA), G-48-19, Appendix A, p. 7; Exhibit A2-2, FortisBC Energy Utilities (FEU), comprised of FortisBC Energy Inc. (FEI), FortisBC Energy (Vancouver Island) Inc. (FEVI), FortisBC Energy (Whistler) Inc. (FEW), and FortisBC Energy Inc. Fort Nelson Service Area (FEFN or Fort Nelson) Common Rates, Amalgamation and Rate Design Application, Exhibit B-9, BCUC Information Request (IR) 7.2.4; p.35**  
**Postage Stamp Rates**

Page 7 of Appendix A to Order G-48-19, which accepted, among other things, FEI's requested rate increases in its 2019-2020 Fort Nelson RRA application, states:

FEI submits that it cannot predict when FEI would apply for postage stamp rates for FEFN or when FEFN's residential customers will no longer experience a rate impact from moving to FEI's rates. FEI explains that this is because "there are a number of factors and circumstances, some beyond FEI's control, that could lead to the rate impact being reduced or increased in the near future." FEI provides the following examples where the rate impact to FEFN's residential customers from moving to FEI's rates would be reduced:

- If FEFN continues to experience negative growth in residential customers and natural gas demand in all rate classes continues to decline;
- If FEFN's system requires capital investments of \$1 to \$2 million to address integrity concerns or for other sustainment projects; or
- If FEI continues to have delivery rate increases of zero to one percent in the rest of FEI's service areas.

- 9.1 Please discuss whether any of the bullets stated in the preamble explain the current status of FEI's Revelstoke service area, with respect to: i) negative growth in propane demand, ii) capital investment requirements to address integrity concerns or other sustainment projects, or iii) delivery rate increases of zero to one percent in the rest of FEI's service areas.

Page 14 of the Application states:

Fully amalgamating the propane and natural gas portfolio costs on an equal basis (as proposed in Option 1) ensures that FEI customers in Revelstoke do not experience differing cost of energy recovery rates due to their location within FEI's service territory.

FEI's Revelstoke propane customers are different from FEI's natural gas customers because they use a different fuel type. However, geographical location itself is the key cause for this difference in fuel type. As such, applying equal cost of energy recovery rates to FEI's Revelstoke propane customers represents an improvement to the current situation in line with the accepted principle of common rates across geographical locations within FEI's service territory...

Page 19 of the Application states:

A typical residential natural gas customer in the FEI Mainland and Vancouver Island service area would experience an approximate overall annual increase of \$0.04, based on an average usage of 90 GJs per year.

In Exhibit A2-2, FEI's response to BCUC IR 7.2.4 stated:

Revelstoke currently has postage stamped delivery rates. The propane commodity cost is flowed through to Revelstoke customers, just as the natural gas commodity cost is flowed through to FEI's natural gas customers. The FEU have no current plans to postage stamp the commodity or midstream costs for Revelstoke as propane is a different fuel type than the natural gas delivered to the Companies' other customers.

- 9.2 Please discuss the reasons why FEI, then FEU, chose not to postage stamp the commodity or midstream costs for Revelstoke as part of its amalgamation of FEI, FEVI, FEW and FEFN.
- 9.2.1 Please discuss the factors that have changed since the FEVI, FEW and FEFN amalgamation application and the impact on FEI's decision to propose amalgamation at this time.
- 9.3 What factors precluded FEI from amalgamating Revelstoke's propane cost with the MCRA previously? Please elaborate.
- 9.4 Does FEI's amalgamation proposal result in FEI's Mainland and Vancouver Island service customers cross subsidizing customers within the same rate class? Please discuss.
- 9.5 Please discuss the advantages and disadvantages of having postage stamp rates that include two different commodities.
- 9.6 Please explain how the cost causation principle is maintained when the proposed amalgamation includes two distinct fuel types.
- 9.7 Please discuss if FEI is aware of any other jurisdictions where two different gas types, with distinct supply, demand, pricing and volatility dynamics, have been amalgamated into the same gas cost recovery rate.
- 9.7.1 Please provide any relevant jurisdictional analysis.

**10.0 Reference: COMMODITY RATE SETTING**  
**Exhibit B-1, pp. 10–11; Exhibit A2-1, 2019-2020 Annual Contracting Plan – Executive Summary, 2019-20 ACP), Attachment, pp. E-4–E-5**  
**Option 2 – Five-Year Rolling Price Difference**

Page 10 of the Application states:

FEI proposes to set the propane gas cost recovery rate with a premium multiplier based on the five-year rolling average of annual propane to natural gas price ratios (AECO natural gas prices and Alberta Propane prices). As an example, Figure 3-1 below shows the five-year rolling average of annual propane to natural gas price ratios from 2012 to 2018, with a comparison of the annual propane to natural gas price ratio. The 2018 five-year rolling average of the ratio is 3.064. It can be seen from Figure 3-1 that the five-year rolling average of the price ratios remains relatively flat. If the propane gas cost recovery rate is set based on the five-year rolling average of the price ratios as an index multiplier the resulting propane cost recovery rate will mitigate the rate volatility for Revelstoke propane customers.

Figure 3-1: Comparison of Propane to Natural Gas Price Ratio



- 10.1 Please provide the monthly AECO natural gas and Alberta propane prices over the past five years in Excel format. As part of your response, please provide the level of correlation between the two prices.
- 10.2 Please discuss the use of a five-year rolling average of annual propane and natural gas prices to determine the premium multiplier versus the use of a of five-year rolling average of monthly propane and natural gas prices to determine the premium multiplier. In your response, please discuss the advantages and disadvantages of each method.

Pages E-4 and E-5 of Exhibit A2-1 identifies the gas procurement and pricing strategy which includes the following statements:

- FEI recommends continuing with a balanced mix of daily and monthly priced commodity supply in the portfolio to provide operational flexibility and to help mitigate adverse price movements.
- The baseload supply receipt point allocation is to remain at the same levels as last year, which is 75 percent at Station 2 and 25 percent at AECO/NIT.

- 10.1 Please explain whether the procurement of propane supply to meet Revelstoke service area requirements is considered part of FEI's baseload supply requirements.
- 10.2 Please compare the monthly Station 2 natural gas price against the Alberta propane price over the past five years, in Excel format. As part of your response, please discuss the level of correlation between the two prices.
- 10.3 Please discuss why the premium multiplier is based only on AECO natural gas prices rather than a weighted natural gas price based on 75%/25% split of Station 2 and AECO prices.

**11.0 Reference: RATE IMPACT  
Exhibit B-1, Section 3.1, pp. 7–8; Appendix D  
Propane Cost Deferral Account**

On pages 7–8 of the Application, FEI states:

The cost of the propane supply portfolio is currently captured in the Propane Cost Deferral Account (PCDA) and is accounted for separately from FEI's natural gas supply portfolio cost. With this Application, FEI proposes to:

1. Amalgamate its Revelstoke propane supply portfolio costs with its natural gas supply portfolio costs by transferring the December 31, 2019 closing balance of the PCDA to FEI's existing MCRA as an opening balance adjustment, effective January 1, 2020;
2. Starting January 1, 2020, capture all Revelstoke propane supply portfolio costs in the MCRA; and
3. Eliminate the PCDA.

The reason that FEI proposes to capture the Revelstoke propane supply portfolio costs in the existing MCRA is because the profile of the Revelstoke propane supply varies with weather. As such, FEI's Revelstoke propane purchases are shaped to the relative level of seasonal consumption, similar to how FEI currently captures costs for seasonally shaping its natural gas supply in the existing MCRA.

Appendix D shows the impact of the proposed rate amalgamation on customers who pay the RS1, RS2, RS3, RS4 and RS5 rates.

- 11.1 Please explain the advantages and disadvantages of continuing to amortize the PCDA to the Commodity Cost Reconciliation Account, similar to how natural gas purchases are amortized. As part of your response, please compare this to the advantages and disadvantages of amortizing the PCDA to the MCRA.

11.2 Please provide updated tables in Appendix D to compare the effect of continuing to amortize the PCDA in the Commodity Cost Reconciliation Account, instead of through the MCRA.

**12.0 Reference: RATE IMPACT  
Exhibit B-1, Section 3.2, p. 8; Section 3.4, p. 14  
Options and Impact on alternative fuel sources**

On page 8 of the Application, FEI states: “FEI considered two options for calculating the propane gas cost recovery rates for Revelstoke customers: 1) equal gas cost recovery and 2) a five-year rolling average of the price difference between propane and natural gas.”

Page 14 of the Application states:

[N]either of the options preclude future review of potential options to upgrade the Revelstoke propane system to natural gas, which may include consideration of alternatives such as a natural gas pipeline, liquefied natural gas (LNG) supply, or compressed natural gas (CNG) supply in consideration of both the economic and non-financial benefits at the time.”

- 12.1 Please comment on how a single rate that represents more than one type of gas product (in this case, natural gas and propane), would affect the rates that FEI charges customers under its Tariff for other fuel sources, such as LNG.
- 12.2 Please discuss FEI’s view as to whether the provision of propane and the provision of natural gas are two distinct services.
- 12.3 Please discuss whether FEI considered any alternative options for calculating the propane gas recovery rates for Revelstoke.
- 12.3.1 If yes, please provide a table comparing alternative options including an explanation of why these options were rejected.
- 12.3.2 If not, please explain why these two options were the only ones explored.
- 12.4 Please discuss, providing supporting data where possible, the factors that FEI would consider when assessing the viability of connecting Revelstoke to the natural gas distribution system.
- 12.5 Please discuss how the proposed amalgamation will smooth the volatility of seasonal price variations. As part of your response, please address the impact of reduced seasonal price volatility on the ability of customers to respond to such price movements.

**13.0 Reference: COMMODITY RATE SETTING  
Exhibit B-1, Section 2.2, pp. 5–6; Section 3.2.1, p. 9; Section 3.4, p. 14  
BC’s Clean Energy Objectives & Carbon Tax**

On pages 5–6 of the Application FEI states:

[T]he proposed changes support the following two of BC’s energy objectives under section 2 of the *Clean Energy Act*:

- (h) to encourage the switching from one kind of energy source or use to another that decreases greenhouse gas emissions in British Columbia; and
- (k) to encourage economic development and the creation and retention of jobs.

Page 9 of the Application states:

Under this equal commodity cost recovery option, FEI's Revelstoke propane and FEI's natural gas customers will pay the same commodity related charges per GJ, but alignment with BC's energy objectives is preserved as propane customers will continue to pay higher carbon tax rates than natural gas customers.

Page 14 of the Application states:

[N]either of the options preclude future review of potential options to upgrade the Revelstoke propane system to natural gas, which may include consideration of alternatives such as a natural gas pipeline, liquefied natural gas (LNG) supply, or compressed natural gas (CNG) supply.

- 13.1 Please discuss FEI's view on how long propane will remain the primary fuel type in Revelstoke.
- 13.2 Did FEI explore the natural gas, LNG or CNG options for Revelstoke at this time? Please discuss.
  - 13.2.1 If so, please provide any cost/benefit analysis FEI has performed for each of the alternative options.
  - 13.2.2 If not, why were these options not explored at this time?
- 13.3 Please provide a table comparing the effective rate per GJ, inclusive of the Carbon Tax, for FEI's natural gas customers, Revelstoke customers, and Revelstoke customers under FEI's amalgamation proposal.
- 13.4 Please confirm, or explain otherwise, that the propane cost savings per GJ for Revelstoke propane customers as a result of the proposed amalgamation is greater than the difference between the higher carbon tax rate paid by Revelstoke propane customers compared with FEI's natural gas customers.
  - 13.4.1 If confirmed, please discuss the efficacy of the carbon tax rate for Revelstoke propane customers.
- 13.5 Please explain how the proposed lower propane rates provide the correct price signal for energy conservation.
- 13.6 Please discuss how lower rates may result in the increased usage of propane and how increased demand may detrimentally affect the net CO<sub>2</sub> emissions savings.
  - 13.6.1 The proposed amalgamation impact reduces the propane commodity rate by approximately \$6/GJ and the difference between the Carbon Tax is approximately \$0.50/GJ. Considering those price differentials, please explain how the proposed amalgamation impacts BC's energy objectives.
- 13.7 Please explain how the potential for an increased demand forecast for propane in Revelstoke meets the clean energy objectives compared to other energy sources, such as biomass, available in Revelstoke.

**D. LOAD GROWTH**

**14.0 Reference: LOAD GROWTH**  
**Exhibit B-1, pp. 15, 18; FortisBC Energy Inc. and FortisBC Inc. (collectively FortisBC) Multi-Year Rate Plan Application for 2020 to 2024 (MRP Application) proceeding, Exhibit B-1, pp. C-56, C-64-C-65**  
**Growth Capital vs. Sustainment Capital**

Page 15 of the Application states:

Another benefit of the rate stability and rate relief offered to Revelstoke customers by the proposed amalgamation of FEI’s propane supply costs into the natural gas supply costs would be accelerated load growth in Revelstoke with conversions from other fuel types (e.g., from heating oil to propane, which would provide associated GHG emissions benefits). This potential load growth could also lead to accelerated capital upgrade requirements for the Revelstoke distribution system.

Page 18 of the Application states: “the total capital cost of the upgrade is estimated to be \$2.798 million in 2019 dollars.”

On page C-56 of the MRP Application states the following:

- FEI’s Growth capital expenditures are necessary to attach new customers to the gas distribution system. These expenditures include the installation of new mains, services, meters and distribution system improvements to serve new customers. The primary driver for Growth capital expenditures is gross customer additions, which is the number of new customers attaching to the gas distribution system with new mains and/or service installations and includes all customer segments.
- Distribution system improvement costs have historically been included in Sustainment capital, but the driver for these costs is more closely tied to customer additions.

Page C-64 states: “The expenditures within Sustainment capital include gas system improvements to the transmission and distribution system in order to meet forecast load and to ensure the safety, reliability and integrity of the system.”

Table C3-7 on page C-65 summarizes Sustainment and Other capital expenditures required over the 2020-2024 period:

**Table C3-7: FEI Sustainment Capital Expenditures 2020-2024 (\$000s)**

	Average 2017-2019P	2020	2021	2022	2023	2024
Customer Measurement	31,864	30,559	31,328	31,781	32,461	32,979
Transmission System Reliability & Integrity	39,663	42,213	37,599	41,021	45,792	47,355
Distribution System Reliability	16,336	14,996	11,949	19,235	12,541	21,890
Distribution System Integrity	22,946	24,219	31,615	25,080	28,924	22,168
Sustainment CIAC	(4,013)	(3,902)	(3,902)	(3,902)	(3,902)	(3,902)
<b>Sustainment Capital – Total</b>	<b>106,796</b>	<b>108,085</b>	<b>108,589</b>	<b>113,215</b>	<b>115,815</b>	<b>120,490</b>

- 14.1 Please discuss whether capital upgrades to the Revelstoke distribution system would be categorized a growth capital expenditure or a sustainment capital expenditure.
  - 14.1.1 If the capital upgrades are considered to be a growth capital expenditure, please explain whether the growth capital formula was applied in deriving the estimated \$2.798 million cost of upgrade.
- 14.2 If the capital upgrades are considered to be sustainment capital, please confirm, or otherwise explain, whether the estimated \$2.798 million cost of upgrade is included in Table C3-7 as provided in the preamble.